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ABSTRACT

A study was conducted to determine whether manipulating the classroom environment to be either apprehension producing (AP) or apprehension reducing (AR) could significantly change the level of students' dispositional writing apprehension. Five student teachers and one secondary education supervisor volunteered to participate in the experiment and developed two classroom environments, one AP and one AR. Subjects were 272 students, grades 7-12, enrolled in English classes at cooperating secondary schools. Each student teacher selected two comparable classes in which to implement one AP treatment and one AR treatment, randomly assigned. The treatments lasted 6 weeks and consisted of six writing assignments--one administered per week. In AP classroom environments, students were exposed to high levels of conspicuousness, intense evaluation schemes, continually novel assignments, and ambiguity of directions. In AR classroom environments, students were exposed to low levels of conspicuousness, de-emphasized evaluation schemes, articulation of assignment sequences, and clear directions. Maintenance of treatment was insured through student logs and supervisor observation. Daly and Miller's Writing Apprehension Test, designed to measure dispositional apprehension, was administered to all classes both before and immediately following the treatments. It was hypothesized that posttest scores would indicate significant differences in levels of dispositional writing apprehension between the AP and AR classrooms. Results indicated that classrooms with apprehension-producing environments yielded significantly higher levels of student apprehension than did classrooms with apprehension-reducing environments. (Two tables of data are included and 12 references are attached.) (MG)

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THE EFFECT OF TWO CLASSROOM ENVIRONMENTS ON THE DISPOSITIONAL WRITING APPREHENSION OF SECONDARY SCHOOL ENGLISH STUDENTS

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Abstract

Research suggests that dispositional writing apprehension is associated with poor attitudes toward school and low achievement. The level of apprehension may vary according to the situation in which the student is asked to write. For example, students evidence writing apprehension when one or more of these variables are present in the classroom environment: (1) high conspicuousness, (2) intensity of proposed evaluation scheme, (3) novelty of a particular writing assignment, (4) ambiguity of directions for writing, and (5) prior negative experience. What is not clear is whether manipulating these situational variables in a controlled classroom environment can bring about change in dispositional writing apprehension. The purpose of this study was to determine whether manipulating the classroom environment to be either apprehension producing or apprehension reducing could significantly change the level of students' dispositional writing apprehension. Five student teachers and one secondary education supervisor volunteered to participate in the experiment. Two classroom environments were developed, one apprehension producing (AP) and one apprehension reducing (AR). Each student teacher selected two comparable classes in which to implement one AP treatment and one AR treatment, randomly assigned. The treatments lasted six weeks. Treatments consisted of six writing assignments, administered one per week. In AP classroom environments, students were exposed to high levels of conspicuousness, intense evaluation schemes, continually novel assignments,

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and ambiguity of directions. In AR classroom environments, students were exposed to low levels of conspicuousness, de-emphasized evaluation schemes, articulation of assignment sequences, and clear directions. Maintenance of treatment was insured through student logs and supervisor observation. The Writing Apprehension Test, designed to measure dispositional apprehension, was administered to all classes both before and immediately following the treatments. It was hypothesized that posttest scores would indicate significant differences in levels of dispositional writing apprehension between the AP and AR classrooms. An analysis of covariance based on the General Linear Model was used. The pretest was treated as a covariate. The pretest accounted for about 59 percent of the variance found on the posttest. Nevertheless, the experimental group effect was significant at the .05 level. No other factor was significant. As was hypothesized, classrooms with apprehension producing environments yielded significantly higher levels of student apprehension than did classroom with apprehension reducing environments.

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Background to the Problem

Writing apprehension is the dispositional tendency for children and adults to avoid writing and writing related activities (Daly and Hailey, 1984). Students who suffer from writing apprehension also experience decreased achievement (Faigley, Daly, and Witte, 1981), are afraid to experiment with new verbal forms (Daly, 1977), and retreat from situations that demand verbal communication (Daly and Shamo, 1978). Daly (1978, 1979) and Daly and Miller (1975) have developed the Writing Apprehension Test (WAT), a twenty-six item instrument with a five-point Likert-type scale, to measure the degree to which a student is dispositionally apprehensive of writing. As Daly and Hailey (1984) note, dispositional writing apprehension measures provide a general view of a given student's anxiety with respect to writing. However, a writer can be more apprehensive in one situation than in another. For example, a graduate student might be more apprehensive about writing a six-hour qualifying examination than about writing a short paper for a specific course.

Situations That Can Cause Apprehension

Daly and Hailey (1984) conceptualized five situational variables that potentially could cause varying degrees of apprehension among writers: conspicuousness, evaluation, novelty, ambiguity, and prior experience. These variables were based on "observations of writing classrooms and reports by students and teachers" (p. 261).

Conspicuousness is the degree to which a student is identified with the written he or she produces. In a highly conspicuous situation, a student's name would appear in large letters on the first page of a paper, visible to one and all. Evaluation is the degree to which a paper is corrected, marked, and commented on. In a highly evaluative situation the teacher would mark every mistake a student made and cover the page with marginal and terminal comments. Novelty is the degree of newness a particular assignment has. In a situation involving a high degree of novelty, a student might be directed to write a poem, when all previous assignments have required the student to write prose. Ambiguity is the degree of clarity and specificity with which the writing is assigned. In a highly ambiguous situation, the teacher would direct the student to write a four-hundred-word essay on birds, giving no suggestions as to purpose of the essay, perhaps to describe an unusual bird, or the audience who would be reading the essay, for example, an ornithologist. Prior experience is the compilation of the student's previous experiences with regard to writing. Students with high apprehension may have a history of negative experiences connected with writing, resulting from one or more of these apprehension-producing variables.

To test their conceptualization of situational writing apprehension,

Daly and Hailey presented 399 undergraduate college students with a hypothetical writing assignment and the description of each of the five situational variables phrased either as apprehension-producing or apprehension-reducing, randomly assigned. In addition, students were directed to take the WAT and two situational apprehension measures developed by Daly and Hailey after Spielberger (Spielberger, Garsuch, and Luschene, 1970) and Buss and Gerjouy (1957). Alpha coefficients for all three measures were above .90 (p. 266). A one way ANOVA on the manipulation checks of the two forms of each of the five situational variables indicated that they were, in fact, perceived as different (e.g., the high conspicuous situation was perceived as high and the low conspicuous situation as low).

Given that certain situational variables can affect dispositional apprehension, the experimenter wanted to determine whether situational variables could be manipulated to produce classroom environments that could affect dispositional apprehension. Whereas Daly and Hailey worked with artificial situations, the experimenter wanted to use actual writing assignments, in local classrooms, over an extended instructional period.

Research Questions and Hypotheses

Of the five situational variables conceptualized by Daly and Hailey, only one--prior experience--could not be controlled as an independent variable. The other four--conspicuousness, evaluation, novelty, and ambiguity--could be manipulated to form apprehension producing (AP) environments as well as into apprehension reducing (AR) environments. If four AP variables were combined they could form a classroom environment significantly different from that produced by

combining four AR variables.

Given that four of the five situational variables could be manipulated to form two experimental classroom environments, one AP and one AR, the experimenter decided to find answers to this question: Can classroom environment affect the level of dispositional writing apprehension experienced by students? The question was transformed into a research hypothesis: The level of dispositional writing apprehension as measured by the Writing Apprehension Test will be significantly different in classrooms which use AP environment from those using AR environment.

Research Design

A two group, pretest/posttest design for analysis of covariance with randomized assignment of treatments to intact classes was used.

The Experiment

Five secondary credential candidates in English and their university supervisor agreed to participate in this study. Since student teachers were about to begin full-time student teaching, each had between five and five English classes to instruct. To insure comparability, student teachers were directed to select two classes that enrolled identical student populations. For instance, a given student teacher would have to select two sophomore English classes of mixed ability, rather than one freshman honors class and one senior basic English class. Since the University cannot require participating schools to assign students randomly for experimental purposes, researchers randomly assigned treatments to each of the five pairs of identical classes. Each student teacher taught one AP class and one AR class.

The Subjects.

The subjects were 272 students, grades 7 through 12, enrolled in English classes offered at cooperating secondary schools.

Treatments

Two experimental treatments were designed, each lasting the identical six-week period and each requiring six writing assignments, one per week.

Apprehension Reducing Environment. Each student teacher employed the AR ENVIRONMENT in one classroom, randomly assigned for that purpose. Student teachers were instructed to give six writing assignments, one per week, but otherwise to follow the district's prescribed course of study. In teaching and assigning each of the six writing assignments, the teachers were instructed to (1) have the students submit their papers in a masked fashion (low conspicuousness), (2) evaluate papers 1, 3, and 5 in binary fashion (± or 0) and papers 2, 4, and 6 by marking only those specific problem areas discussed in advance of the submission of the papers (low evaluation), (3) explain clearly the relationship of each new writing assignment to the ones that preceded it (low novelty), and (4) explain in detail the purpose of the assignment and the audience for whom the assignment was to be intended (low ambiguity).

Apprehension Producing Environment. Each student teacher employed the AP ENVIRONMENT in the other of two classes, according to random assignment. Just as in the other classroom, the student teachers made six writing assignments, one per week for six weeks. However, in these classes, student teachers (1) required students to submit papers with names clearly visible on top (high conspicuousness), (2) evaluated the papers completely, marking each error (high evaluation), (3) provided no transition between writing

assignments (high novelty), and (4) gave minimal direction to the students about the purpose and audience of the assignment (high ambiguity).

Control of Treatments. Given the wide range of grade levels and school sites, it was impossible to control for curriculum. Nevertheless, each student teacher controlled for writing assignments across treatments. If a given writing assignment was made in an AR class that same assignment had to be made in the corresponding AP class during the same day.

Instrumentation and Data Collection

The Writing Apprehension Test (WAT) was administered to all students both at the start and at the conclusion of the treatments. The WAT has 26 items in the form of statements about feelings a student has about writing. Individuals indicate the degree of agreement of disagreement of using a 5-point Likert-type scale. The higher the numerical score the higher the level of apprehension. The least apprehensive writer would score 26; the most apprehensive writer would score 130. The mid-score is 78. In three studies, normative data were provided. Daly and Miller (1975) administered the WAT to 164 undergraduates, with a mean score of 79.28 and a standard deviation of 18.86. Subsequently, Daly (1979) tested 3602 undergraduate students enrolled in a required composition course, with a mean score of 75.59 and a standard deviation of 13.35. This test has been employed in over forty studies. Average internal consistency ranges from .88 to .95. Fagan Jensen and Cooper (1985) list eight ways in which the validity of WAT has been established, including a correlation with standardized measures of writing competence, such as the SAT, ACT, and the ECT.

To accommodate differences in reading ability, the teachers were instructed to read each item aloud and clarify any language that the

students felt was ambiguous or difficult, for both the pretest and the posttest. In addition to administering the WAT at the start and at the conclusion of the treatments, each student teacher kept a research diary (after Myers, 1985) of student behavior during the course of the two treatments.

Also, the University supervisor made three observations in each of the ten classes participating in the project and made observational notes on teacher-student interactions.

Maintenance of Treatments

Differentiation of treatment was insured in three ways. First of all, student teachers were required to participate in a six-week training session prior to the experiment. In the training session, student teachers were given a review of research on writing apprehension, given introductory background information on how to conduct experimental research, instructed in data collection procedures, indoctrinated in the importance of maintaining the differential treatments, and given demonstration model lessons for each of the two treatments so that they could replicate these with ease in their own classrooms.

Second, the University supervisor observed each of the ten participating classrooms three times, making field notes on the teacher-student interactions and compiling data to satisfy the demands of the experiment that the treatments had, in fact, remained distinct.

Third, during the course of the experiment "trouble-shooting" sessions were held with the student teachers to deal with questions, problems, and concerns.

Data Analysis and Results

The Writing Apprehension Test was administered both before and after the treatments and subsequently scored according to the guidelines established by Daly and Miller (1975). Fifty students who had not participated in at least 25 of the 30 instructional days were eliminated from consideration. As a result, the data analysis was based upon 222 students' scores, 107 students in five AP classrooms and 115 students from five corresponding AR classrooms. Both pretest and posttest scores on the WAT were compiled for the 222 students enrolled in the ten participating classrooms, five AP classes and five AR classes.

An analysis of covariance based on the General Linear Model (GLM) was considered appropriate for these data. The pretest was treated as a covariate by using a Type I GLM procedure (SAS Institute Inc., 1985) in which the pretest was entered first in the model. The teacher effect was entered in the model second followed by experimental group and last by a group X teacher interaction. Since the Type I GLM is an order-dependent model, the differences between the experimental groups were evaluated holding the pretest and teacher effect constant. Table 1 summarizes these results.

(Insert Table 1 about here.)

It can be seen from Table 1 that the pretest was highly related to the posttest. In fact, the pretest accounted for about 59 percent of the variance found on the posttest. Nevertheless, the experimental group effect was significant at the .05 level (see also Table 2). Since the group effect was significant holding both pretest and teacher influence constant, the two

methods under discussion can be interpreted as making a difference on posttest. Other than pretest and group effects, no other factor in this model was significant.

(Insert Table 2 about here.)

The diaries which the student teachers kept during the experiment were read to determine that the student behavior in the two treatment groups was markedly different. For instance, there were recurring reports of agitation in the apprehension producing classrooms and some laxity with respect to the appearance of the papers in the comparable apprehension reducing classrooms. After reviewing the diaries, the experimenter was convinced that the two treatments had created distinctly different emotional climates within the two sets of classrooms.

The University supervisor's field notes verified that the teachers had indeed followed the two experimental treatments and had treated the respective classes differently according to the prescribed treatment.

Discussion

At the outset of this study, the experimenter wanted to determine whether classroom environment could affect the level of writing apprehension experienced by junior and senior high school students. Previous research had shown that writing apprehension has a debilitating effect on children and adults, causing them not only to avoid situations that demand writing but also to choose occupations that do not require speaking and writing. Writing apprehension, then, has the potential for negatively affecting school experiences as well as reducing the range of occupational choice. Writing

apprehension, then, is a significant educational problem. However, as shown in this study, writing apprehension can be reduced by creating the kind of classroom environment that reduces such apprehension.

Implication for Further Research

Daly and Hailey (1984) identified five situations that can affect a student's level of apprehension--conspicuousness, emphasis on evaluation, novelty, ambiguity, and prior experience. However, Daly and Miller had students responding only to hypothetical situations, not real situations. This study selected four of the five situational variables and fashioned them into two classroom environments, one which was aimed at reducing apprehension (AR) and one which was aimed at increasing apprehension (AP). A six-week intervention effected significant differences in the levels of apprehension of students enrolled in AR and AP classes. The treatments were powerful in that they clustered four apprehension situational variables. Marked differences in student classroom behavior were noted not only in the diaries of the student teachers but also in the observational notes of the supervisor, who observed these classes three times each.

Future research in this area is needed. For instance, in this study the experimenter was unable to control for prior experience. Future studies could involve pre-treatment assessment of prior experiences with writing, either in the form of questionnaires, open-ended questions, or autobiographical essays. The assessments could be categorized according to degree of negativity and used for post-experiment analysis: e.g., Does an apprehension reducing environment affect students with negative prior experiences the same as it does students with positive prior experiences. The pre-assessment could also be used as a basis for a stratified random

assignment to treatment within classrooms. Also, since this study used four variables as a basis for developing classroom environment, further studies could use one or more of these variables in combination. For example, which is more powerful--ambiguity and novelty, or ambiguity and evaluation, or novelty and evaluation, or ambiguity alone, etc.?

Implications for Teaching

This study has shown that classroom environment has a significant effect on the level of writing apprehension. The study suggests that how teachers handle writing assignments in their classrooms can affect the attitudes of their students toward these assignments. Specifically, if a teacher publicly identifies students with their written products, stresses extensive and continual evaluation procedures, and introduces new assignments casually without sufficient enabling instructions, the result will be increased writing apprehension on the part of the students. If, on the other hand, teachers allow students to use pseudonyms when submitting papers, de-emphasize extensive evaluation strategies, provide segues between one assignment and the next, and give clear, helpful instructions, students' attitudes toward writing will improve.

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Table 1. Results from the Analysis of Covariance (GLM)

Source	DF	Type I SS	Mean Square	F Value	Pr > F
PRETEST	1	41251.152986	41251.152986	317.60	0.0001
TEACHER	4	160.241263	40.060316	0.31	0.8721
GROUP	1	543.971813	543.971813	4.19	0.0419
TEACHER X GROUP	4	87.807431	21.951858	0.17	0.9540

Table 2. Posttest mean scores for the students enrolled in the five AP classes and the 5 AR classes

GROUP	POSTTEST LSMEAN
AP	76.2008856
AR	73.1674730